

REMARKS

Pending Claims:

In this application, claims 1, 6-27, and 34-41 are currently pending. Claims 1, 6-9, 11-12, 16-17, 19, 21, and 23-25 are amended by this Response. Claims 2-5 and 28-33 have been deleted. Claims 10, 13-15, 18, 20, 22, and 26-28 have not been altered since filing. Claims 34-41 have been added. Entry of these amendments is respectfully requested.

Rejection under 35 U.S.C. §112 (paragraph 6)

In the Office Action, a rejection was made under 35 U.S.C. §112 (paragraph 6) to claims 11 and 32. In response, claim 11 has been amended to clarify its language, and claim 32 has been deleted. The applicant believes that these amendments have overcome the §112 rejections.

Rejection under 35 U.S.C. §102(e)

The Examiner has rejected claims 1-33 as being anticipated by Carvey, U.S. Patent No. 6,606,656, with inherent features as evidenced by Dally, U.S. Patent No. 6,370,145. Carvey shows a method of connecting multiple modules (such as fabric routers) together in a multi-module system. (Col. 6, lines 3-9). The modules are connected over the backbone, with one switch router being directly connected to six other modules (positive and negative directions in three dimensions). Col. 5, lines 14-23. As acknowledged in the office action, Carvey is directed to the features of the backplane, and does not expressly mention input/output modules. The Examiner argues that the input/output modules are an inherent part of the fabric router modules, as taught by Dally. The applicant accepts that Carvey teaches the linking of multiple switch router modules over a backbone, and that Dally explains that each switch router module can consist of one or more inputs (i.e., "input lines" or "input modules") connected to an output ("output line" or "output module") over a crossbar switch.

The applicant has amended the two rejected independent claims remaining in this application, namely claims 1 and 16. These claims now require a first and second backplane, each having a set of input/output modules and a set of switching modules that can establish direct connections between the ports on the input/output modules. In addition, the claims now include a direct connection limitation between the input/output modules of the second backplane to the switching module of the first

backplane, which allows a switching module on one backplane to provide direct connections to the fibre channel ports on the input/output modules of the other backplane.

This is a significant departure from the prior art systems exemplified by Carvey and Dally. These prior art systems create a fabric between complete routing switches, with each switch having an input, a crossbar switch module, and an output. This is true even though Carvey refers to these switches as “modules,” as he is using the term to refer to a complete router. Carvey, col. 6, lines 6-10. As Dally explains, each router has an input and an output line interface and a bus or crossbar switch component. Dally, col. 1, lines 43-56, and Figures 2 and 3.

The relevance of this distinction can be seen in examining the path data takes between an input of a first switch and an output of a second switch. In Carvey/Dally, the data path goes from the input line (of switch one) to a switch matrix (of switch one) to an output line (of switch one) through the backplane of Carvey to an input line (of switch two) to a switch matrix (of switch two) and then to the output line (of switch two). In contrast, the present invention increases the capability of a single switch. The data path in the present invention goes from the input line (of switch one) to the switching matrix (of switch one) to a chassis interconnect (linking multiple chassis) to the output line (of switch two).

This ability of each switching module to make direct connections to ports on a separate backplane clearly distinguishes the present invention from the cited prior art. This distinction is set forth in the amended independent claims, and is not taught or suggested in Carvey, Dally, or any other cited reference.

New Claims:

Claims 34 to 41 are new claims relating to the use of hardwired and jumper connections between at least one input/output module and at least one switching module. These claims are supported by the Specification as originally filed, and are not taught or suggested in the prior art.



CONCLUSION

All of the claims remaining in this application should now be seen to be in condition for allowance. The prompt issuance of a notice to that effect is solicited.

Respectfully submitted,
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